



**Science Unit:** *Decomposers and Recyclers*

**Lesson: 4** *Field Trip to Burns Bog*

School Year: 2012/2013

Developed for: Dr. George M. Weir School, Vancouver School District

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Grade level: Presented to grades K-3; appropriate for grades K – 7 with age appropriate modifications.

Duration of lesson: 2 hours not including travel time

Notes: Book a Burns Bog Conservation Society tour 2-3 months ahead of time. We combined a Burns Bog tour with a tour of the Vancouver Landfill in Delta to see how humans recycle. Please see Scientist in Residence Lesson 1 Field trip to Vancouver Landfill in the Plastics science unit.

[http://www.scientistinresidence.ca/pdf/physical-science/Plastics/SRP\\_Plastics\\_Lesson%201%20F.pdf](http://www.scientistinresidence.ca/pdf/physical-science/Plastics/SRP_Plastics_Lesson%201%20F.pdf)

## Objectives

1. To learn about a bog ecosystem and why Burns Bog is important to the Lower Mainland.
2. To learn about why decomposition is very slow in a bog.
3. To explore plants and animals that inhabit Burns Bog.

## Background Information

A bog is a type of wetland that only receives water from precipitation and has surface standing water for part of the year. It is made up of a thick layer of peat (decomposed plant matter). Bogs are nutrient poor, and often acidic and waterlogged. The Lower Mainland is home to Burns Bog, the largest raised bog in Western North America, covering about 3000 hectares. Raised bogs, such as Burns Bog are created over thousands of years, and are higher than the surrounding areas, by an ever-growing layer of peat. A raised bog must have a layer of at least 30 cm of peat. This peat is composed of decomposing plant matter. Sphagnum moss is one of the key plant species in Burns Bog, and makes up for most of the peat.

Burns Bog is a unique ecosystem, and a very important green “island” in an urban landscape. It is home to many animal and plant species, some of which are endangered, like the Sandhill Crane. Burns Bog is also important as it absorbs carbon dioxide from the atmosphere and stores it in the peat. It filters rainwater and helps to prevent flooding. Burns Bog has a very slow rate of decomposition due to its acidity and its lack of oxygen (due to it being waterlogged for much of the year).

## Vocabulary

Decomposer: Organisms that obtain their food and energy from breaking down complex organic substances from organisms or their parts that are dead or decaying, into simple organic substances they can use. Fungi and bacteria are decomposers.

Detritivore/ Decomposer: An organism that obtains its nutrients by consuming detritus (fresh and decomposing plant or animal materials as well as organic fecal matter).



## SCIENTIST IN RESIDENCE PROGRAM

- Wetland:** Land where the water table is at the surface or above the surface of land during at least part of the year.
- Bog:** A type of wetland which has accumulated peat at least 30 cm thick and where decomposition is very slow due to cold, wet, acidic conditions.
- Raised Bog:** A type of bog which has a lot of accumulated peat and is higher than surrounding areas.
- Peat:** Layer of decomposing plants, often mosses, found in bogs, which give bogs a spongy feel.
- Sphagnum Moss:** A group of mosses, commonly found in bogs, that can absorb large quantities of water and when decomposed, can turn into peat.

### **Materials**

- Plastic bags to sit on during lunch
- Packed lunches and water bottles
- Camera
- First Aid Kit
- Cell phone

Burns Bog Conservation Society conducts two-hour, age-appropriate tours for school groups throughout the year. These tours cover specific plants and animals found in the bog, food webs, and how a bog is formed. Other information they impart includes First Nations and bogs, natural resources (peat extraction), and the history of the bog. They also touch on human impacts on the bog ecosystem. Washroom facilities can be found at Planet Ice, a short walk from the trail head.

Burns Bog Conservation Society can be reached at: 604 572 0373 or Fax 604 572 0374.  
Email: [info@burnsbog.org](mailto:info@burnsbog.org)

### **References**

<http://www.burnsbog.ca/classroomprogram.html>